IN THE CLAIMS:

Please cancel Claims 27 and 28 without prejudice or disclaimer of subject

matter. Please amend Claims 15 and 22, as follows:

1. to 14. (Cancelled)

15.   (Currently Amended) An image processing apparatus comprising:

an image memory unit adapted to store image data;

first and second coding units ~~each~~ capable of at least encoding image data

stored in said image memory; and

first and second buses connected respectively to said first and second coding

units and to a switching control unit which is connected by a third bus to an image memory

unit adapted to store image data,

wherein said switching control unit is adapted to control access from said

first and second coding units to said image memory unit by providing a first data transfer

channel between said first bus and said third bus and a second data transfer channel

between said second bus and said third bus simultaneously so that image data coding of a

first portion of the image data, executed by said first coding unit, and image data coding of

a second portion of the image data, executed by said second coding unit, can be executed in

parallel.

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16.   (Previously Presented) An apparatus according to claim 15, wherein at least one of said first coding unit and said second coding unit are also capable of decoding image data.

17.   (Previously Presented) An apparatus according to claim 15, wherein said switching control unit further comprises:

a memory control unit, connected to said third bus, adapted to control said image memory unit; and

a bus control unit connected to said first and second buses and further connected to said memory control unit through a fourth bus.

18.   (Previously Presented) An apparatus according to claim 17, further comprising:

an image interface unit adapted to connect the image processing apparatus to an image input apparatus or an image output apparatus and transmit the image data to said image output apparatus or receive the image data from said image input apparatus; and

a transfer control unit adapted to control the image data transfer between said image memory unit and said apparatus connected to said image interface unit through said switching control unit.

19.   (Previously Presented) An apparatus according to claim 18, wherein said switching control unit further has a cache memory.

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20.   (Previously Presented) An apparatus according to claim 18, wherein said transfer control unit is adapted to discriminate the amount of image data stored in said image memory unit so that in a case where said image data amount reaches an amount by which a connected image output apparatus can output an image at a predetermined speed irrespective of the difference of processing speeds between said image input apparatus and said image output apparatus, and said image processing apparatus transfers image data from said image memory unit to said connected image output apparatus through said switching control unit.

21.   (Previously Presented) An apparatus according to claims 15, wherein said switching control unit comprises a crossbar switch.

22.   (Currently Amended) A method of executing image processing on a on an image processing apparatus having first and second coding units each capable of encoding image data connected to first and second buses connected to a switching control unit connected by a third bus to an image memory unit adapted to store image data, said method comprising:

an access control step of controlling access from said first and second coding units to said image memory unit by providing a first data transfer channel between said first bus and said third bus and a second data transfer channel between said second bus and said third bus simultaneously; and

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an executing step of executing image data coding <u>of a first portion of the</u>

<u>image data, executed</u> by said first coding unit, and image data coding <u>of a second portion of</u>

<u>the image data, executed</u> by said second coding unit, in parallel,

<u>wherein the first portion of the image data is transferred from the image</u>

<u>memory unit by using the first data transfer channel and the second portion of the image</u>

<u>data is transferred from the image memory unit by using the second data transfer channel</u>.

23.   (Previously Presented) A method according to claim 22, wherein at

least one of said first coding unit and said second coding unit are also capable of decoding

image data.

24.   (Previously Presented) A method according to claim 23, further

comprising:

a connecting step of connecting the image processing apparatus to an image

input apparatus;

a receiving step of receiving the image data from said image input

apparatus; and

a transfer control step of controlling the image data transfer between said

image memory unit and said image input apparatus connected to the image processing

apparatus in said connecting step.

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25.   (Previously Presented) A method according to claim 23, further

comprising:

a connecting step of connecting the image processing apparatus to an image

output apparatus;

a transmitting step of transmitting the image data to said image output

apparatus; and

a transfer control step of controlling the image data transfer between said

image memory unit and said image output apparatus connected to the image processing

apparatus in said connecting step.

26.   (Previously Presented) A method according to claim 24, further

comprising the step of:

a discriminating step of discriminating the amount of image data stored in

said image memory unit so that in a case where said image data amount reaches an amount

by which a connected image output apparatus can output an image at a predetermined

speed irrespective of the difference of processing speeds between said image input

apparatus and said image output apparatus, the image data being transferred from said

image memory unit to said connected image output apparatus through said switching

control unit.

27. and 28. (Cancelled)

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